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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/881,769	06/18/2001	Izuru Nakai	P21131	8245
7055	7590	11/21/2003	EXAMINER	
GREENBLUM & BERNSTEIN, P.L.C. 1950 ROLAND CLARKE PLACE RESTON, VA 20191			STACOVICI, STEFAN	
			ART UNIT	PAPER NUMBER

1732

DATE MAILED: 11/21/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Advisory Action

Application No.

09/881,769

Applicant(s)

NAKAI ET AL.

Examiner

Stefan Staicovici

Art Unit

1732

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 22 October 2003 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

PERIOD FOR REPLY [check either a) or b)]

- a) ☒ The period for reply expires 6 months from the mailing date of the final rejection.
- b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection. ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1. ☒ A Notice of Appeal was filed on 22 October 2003. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.
2. ☒ The proposed amendment(s) will not be entered because:
- (a) ☒ they raise new issues that would require further consideration and/or search (see NOTE below);
 - (b) ☐ they raise the issue of new matter (see Note below);
 - (c) ☒ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
 - (d) ☐ they present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: See attachment.

3. ☐ Applicant's reply has overcome the following rejection(s): _____.
4. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
5. ☐ The a) ☐ affidavit, b) ☐ exhibit, or c) ☐ request for reconsideration has been considered but does NOT place the application in condition for allowance because: _____.
6. ☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.
7. ☐ For purposes of Appeal, the proposed amendment(s) a) ☒ will not be entered or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

The status of the claim(s) is (or will be) as follows:

Claim(s) allowed: None.

Claim(s) objected to: None.

Claim(s) rejected: 1-3 and 5-11.

Claim(s) withdrawn from consideration: 4.

8. ☐ The drawing correction filed on _____ is a) ☐ approved or b) ☐ disapproved by the Examiner.
9. ☐ Note the attached Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____.
10. ☒ Other: See attachment

ATTACHMENT TO ADVISORY ACTION

1. Applicants' After-Final amendment filed October 22, 2003 will not be entered because the proposed amendments raise new issues that would require further consideration and also, since the proposed amendments are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal. Specifically, the newly added limitations of "drilling *through all layers* of the material by at least one pulse having a first energy" and "an interval between the at least one pulse having a first energy and the at least one pulse having a second energy being approximately 200 μ s" introduces subject matter which has not been previously presented and as such would require further consideration.

Response to Remarks

2. Applicants' arguments filed October 22, 2003 have been fully considered.

In regard to the restriction requirement mailed with the Non-Final Rejection of November 4, 2002, Applicants argue that "the Examiner has not established the existence in the art of a 'laser apparatus that has a converging lens that is moved in a vertical direction to the target'" (see page 6 of the After-Final amendment filed October 22, 2003). In response, it should be noted that under MPEP §803, "Examiners must provide reasons and/or examples to support conclusions, but *need not cite documents to support* (emphasis added) the restriction requirement."

In regard to Applicants' arguments drawn to the rejections under 35 U.S.C. 112, 1st and 2nd paragraphs (see pages 7-8 of the After-Final amendment filed October 22, 2003), Applicants' arguments are drawn to newly presented claim limitations not previously presented. It should be

noted that if the After-Final amendment filed October 22, 2003 had been entered the rejections under 35 U.S.C. 112, 1st and 2nd paragraphs would have been withdrawn.

Applicants argue that because the layer in Ayrton ('456) is not "prone to delamination" and "the use of multiple pulses or pulse trains" is not disclosed, there is "*no motivation provided therein* (emphasis added) to modify the disclosure thereof in order to solve the solved problem in a dramatically different fashion" (see page 8 of the After-Final amendment filed October 22, 2003). Further, Applicants argue that Ayrton ('456) "teaches a different solution...by decreasing the density of the resin" (see page 9 of the After-Final amendment filed October 22, 2003). In response, it should be noted that Ayrton ('456) specifically teaches that the concentrated heat of the laser results in avoiding delamination (see col. 3, lines 47-49) when drilling in a multi-layered material. Although Ayrton ('456) "teaches a different solution...by decreasing the density of the resin," WO 86/02301, teaches another method of reducing delamination by only relying on the laser to drill holes in a multi-layered material without delamination. Further, it should be noted that under MPEP §2144, "the rationale [to combine] may be expressly or impliedly contained in the prior art or it may be reasoned from knowledge generally available to one of ordinary skill in the art, established scientific principles, or legal precedent established by prior case law. In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); In re Jones, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). Therefore, it would have been obvious for one of ordinary skill in the art to have provided a first train of low-powered laser pulses to drill a hole in a multi-layered sheet as taught by WO 86/02301 in the process of Ayrton ('456), because WO 86/02301 specifically teaches that low-powered laser pulses avoid delamination of said multi-

layered sheet, whereas Ayrton ('456) teaches laser drilling in a multi-layered sheet while avoiding delamination of said multi-layered sheet, hence both references solving the similar problem of delamination of a multi-layered sheet while drilling holes therein.

Applicants' argue that the art of record does not teach or suggest, either alone or in combination, "drilling *through all layers* of the material by at least one pulse having a first energy" and "an interval between the at least one pulse having a first energy and the at least one pulse having a second energy being approximately 200 μ s" (see pages 10-12 of the After-Final amendment filed October 22, 2003). However, these arguments are drawn to newly presented claim limitations not previously presented. As such, the proposed amendments raise new issues that would require further consideration and a new search.

In response to applicant's argument that there is no suggestion to combine the teachings of Ayrton ('456), WO 86/02301 and Temple *et al.* ('311) (see page 13 of the After-Final amendment filed October 22, 2003), the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, as noted throughout prosecution of the instant application, Temple *et al.* ('311) specifically teach the desirability of trimming a drilled hole by increasing the power of a laser beam (see col. 7, lines 1-11).


Conclusion

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stefan Staicovici, Ph.D. whose telephone number is (703) 305-0396 (until December 22, 2003) and (571) 272-1208 (after December 23, 2003). The examiner can normally be reached on Monday-Friday 8:00 AM to 5:30 PM and alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael P. Colaianni, can be reached at (703) 305-5493. The fax phone number for this Group is (703) 305-7718.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0661.

Stefan Staicovici, PhD


11/18/03

Primary Examiner

AU 1732

November 18, 2003